

NAME:.....

### READING PASSAGE

You should spend about 20 minutes on **Questions 1-14**, which are based on Reading Passage below.

## Keeping Time: Clockmaking in Britain, Switzerland, and America

- A** Timepieces of various sorts have been in circulation since ancient times, but the history of the clock industry in the modern sense begins in the 18th century. Prior to then, clocks and watches were largely confined to the realms of wealthy hobbyists, and were only used to tell time in a crude way, but changes in transportation brought on by the Industrial Revolution made timekeeping a necessity and helped cement time consciousness in the minds of the masses.
- B** In design, production, and trade, Britain was the frontrunner in the modern clock industry. The British penchant for producing clocks known for their accuracy and portability was perfectly suited for the needs of a growing, mobile population, and the early development of the railroad in Britain provided a catalyst for its market hegemony in the first half of the 19th century. Because the safe and predictable operation of railways was highly dependent upon keeping track of time, clocks were posted at intervals throughout the railway system to allow engineers to synchronise their chronometers, and telegraph services would periodically wire times to stations throughout the railway system so that clocks could be continually adjusted for accuracy.
- C** While this helped prevent accidents and allowed railway companies to keep tighter schedules, it also helped travellers to anticipate arrivals, departures, and connections with greater precision. These developments underpinned a burgeoning awareness of the importance of time throughout society, prompting those with sufficient means to purchase pocket watches. Thus, train travel increased the demand for timepieces and bolstered the overall clock industry in the United Kingdom.
- D** However, there were drawbacks to the British system that would be exploited by competitors. Namely, the British market was solely devoted to handmade clocks, and avaricious craftsmen who profited from their esoteric skills viewed mechanisation as a threat and actively lobbied against the use of machinery to craft 'fake clocks'. As a result, British timepieces remained extremely costly to produce. But while the British were antagonistic toward mechanisation, this was not the case in Switzerland, where companies

began to experiment with the automated manufacture of individual components, such as plates and wheels. By using machines to fashion some parts, Swiss timepieces could be fabricated more quickly and cheaply than British timepieces.

- E** But the Swiss did not submit to the allure of fully mechanised production. Instead, they adopted a flexible system whereby machines were used in the first stage of production to create semi-finished products, and highly skilled artisans were responsible for the final touches. This approach afforded the best of both worlds, as Swiss timepieces could be produced efficiently without sacrificing the diversity and quality of hand craftsmanship. State-of-the-art machinery and an expert and adaptable workforce allowed Swiss companies to respond quickly to fluctuations in market demand and consumer preferences, and Swiss timepieces, especially watches, gradually became synonymous with 'top quality' in the minds of buyers. Watches under the moniker 'Swiss made' fetched handsome prices in jewellers and other high-end shops both at home and abroad, and ultimately the Swiss overtook the British as the recognised industry leader and held that position for many years. Many Swiss-made timepieces ended up in US markets, where American clockmakers focused on quantity at the expense of quality.
- F** Although the United States lacked the sheer numbers of skilled craftsmen of their European counterparts, American artisans paved the way for inexpensive timepieces through perfecting the art of mass production. By 1815, Eli Terry, an engineer in Connecticut, was using water-powered mills to fabricate completely uniform and interchangeable parts that were ready to be assembled without any manipulation or fine tuning by skilled labourers. Consequently, his clocks could be produced quickly by apprentices without the need for journeymen. Understanding the commercial value of his undertakings, Terry attempted to safeguard his methods with patents, but his legal actions did not hold back the tide of competitors for long. Other companies followed suit and by the late 1800s, Americans were producing timepieces quickly and cheaply on a massive scale. In 1899, the Ingersoll Watch Company's 'Yankee' pocket watch sold for one dollar, and these dollar watches were coming off the assembly line on the order of eight thousand per day.
- G** The fact that the Americans could produce timepieces virtually anyone could afford had its advantages. American clocks and watches flooded the world market, eventually overtaking Swiss brands not only in sales but also in revenue. Between 1945 and 1970, the Swiss share of the global watch market plummeted from 80 to 42 per cent, and by 1970, two US watch companies, Timex and Bulova, ranked first in worldwide sales and total revenues, respectively.



Questions 1-8

Reading passage has seven paragraphs, A-G.

Which paragraph contains the following information?

**NB** You may use any letter more than once.

- 1 contrasts between British and Swiss attitudes toward mechanisation
- 2 a reference to watches being restricted to one segment of society
- 3 mention of how an individual tried to legally protect his production process
- 4 examples of benefits that timekeeping provided for rail travellers
- 5 a description of changes in global market shares among watch companies
- 6 reasons why certain watches were recognised for their craftsmanship
- 7 a statement of how American mass production laid the foundation for cheaper timepieces
- 8 how timekeeping was maintained on early railway networks

Questions 9-14

Complete the notes below.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer.

**A Tale of Three Countries: The Clock Industry in England, Switzerland, and the United States**

- British clocks were renowned for their **9** ..... as well as their accuracy.
- British craftsmen saw **10** ..... as a danger to their industry.
- Swiss watches were partly machine built but **11** ..... supplied the final touches.
- Swiss watches were costly and could be found in high-end shops and **12** .....
- In America, **13** ..... were used to make regular parts that were interchangeable.
- Eli Terry did not require journeymen, as his clocks were rapidly put together by **14** .....

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